

Analysis of today's LOS of each of the freeway segments by direction used the latest software from the Transportation Research Board Highway Capacity Manual (HCM) 2000 Chapter 23 and today's traffic. It measured the LOS at F (extremely congested) for four segments, E (severe congestion) for one segment, and D (significant congestion) for 11 segments. It should be noted that the segments of I-75 in the study area shown as operating at LOS C or D are normally worse in reality. The HCM software does not account for turbulence in the corridor created by merging traffic and backups from more congested segments. There are approximately 1,300 crashes a year on I-75 in the study area, i.e., 3.5 crashes per day. Delays and lane blockages due to crashes, in addition to lane blockages that can occur by automobile breakdowns, further worsen roadway operations along I-75. Overall, high demand causes I-75 to operate at severe congestion, if not breakdown conditions (LOS E or F) in the three-lane sections during the peak traffic periods. The result is overall lower speeds, queuing, and lower observed volumes.

Another item of note is that today's I-75 volumes are relatively balanced for northbound and southbound directions of travel. This means the full capacity of the road is being used.

### 2.3 Future Traffic Projections

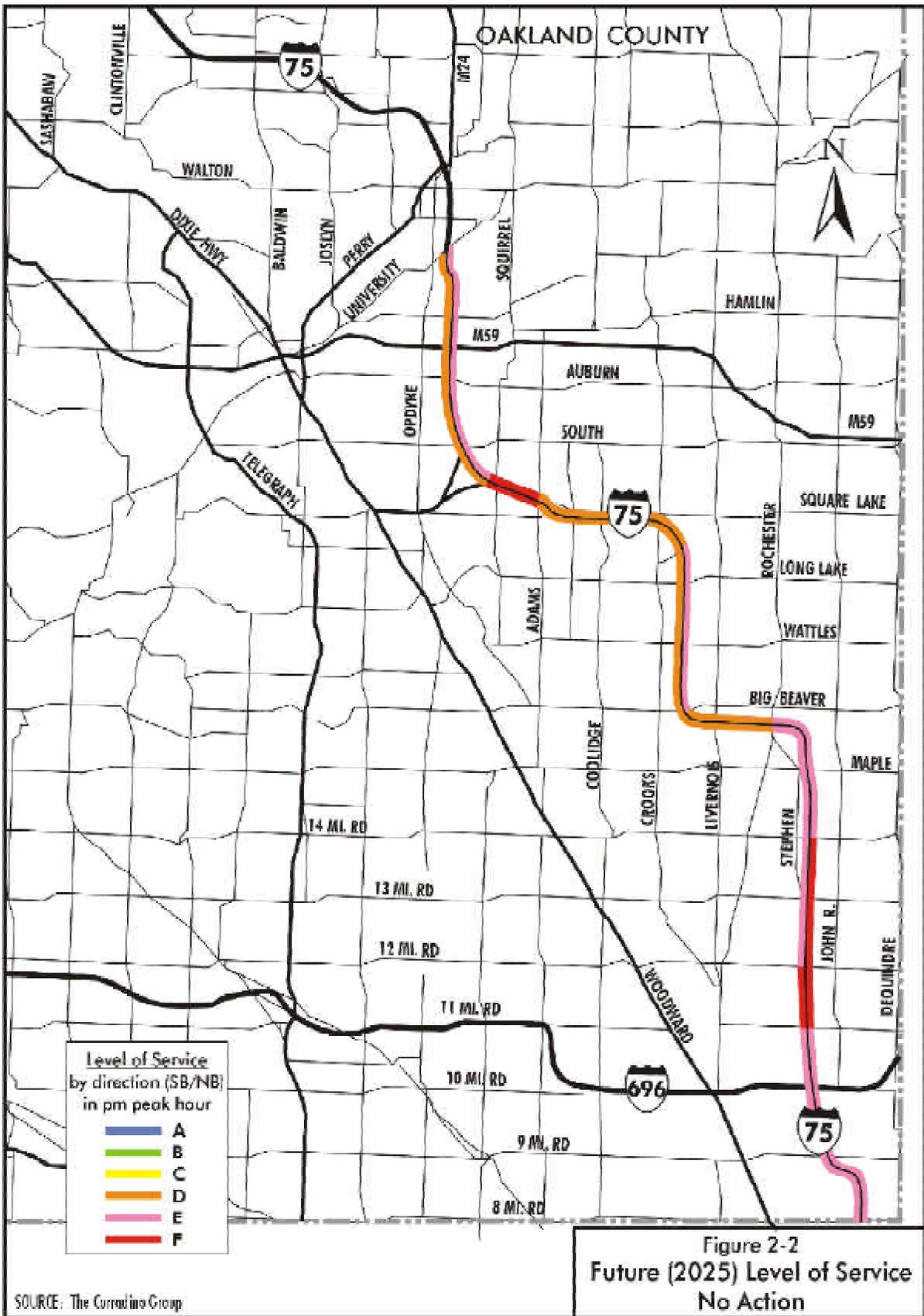
In order to assess the need for the project, SEMCOG's model was used in 2002 to study the "No Build" scenario for the year 2025. The "No Build" scenario is the future situation that assumes projected population growth and other committed/cost feasible road improvements will occur, but that no improvements will be made to I-75 within the project area other than normal maintenance. The year 2025 was selected for this study because projects constructed with federal funds must address the traffic needs projected for 20 years from now.<sup>6</sup> These projections demonstrate that the existing roadway, without improvement, will experience severe congestion throughout its length (Table 2-2 and Figure 2-2) in 2025.

Table 2-2  
2025 PM Peak Hour Traffic Volumes and LOS for I-75 - No Build

Segment	Volume		NB LOS*	SB LOS*
	Northbound	Southbound		
8 Mile Road to 9 Mile Road	7,773	7,340	E	E
9 Mile Road to I-696	7,827	7,765	E	E
I-696 to 11 Mile Road	7,590	7,655	E	E
11 Mile Road to 12 Mile Road	6,430	6,562	F	F
12 Mile Road to 14 Mile Road	6,250	6,090	F	E
14 Mile Road to Rochester Road	5,812	5,724	E	E
Rochester Road to Big Beaver Road	4,820	4,908	D	D
Big Beaver Road to Crooks Road	5,654	5,086	E	D
Crooks Road to Adams Road	5,346	5,127	D	D
Adams Road to Square Lake Road	5,586	5,560	F	F
Square Lake Road (I-75 BL) to M-59	7,803	7,014	E	D
North of M-59	7,460	6,575	E	D

\*Considering weaving and incidents LOS F would prevail over these segments.

<sup>6</sup>SEMCOG is updating the region's transportation plan for 2030. That work is not to be completed until sometime in 2003, at the earliest.



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